Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEFANO SCIALLA, PETER R. J. GEBOES,
MICHEL J. CARRIE, and EDDY VOS

Appeal No. 1996-3847
Application No. 08/162,063

ON BRIEF

Before JOHN D. SMITH , KRATZ, and TIMM, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-19, which are all of the claims pending in this application.

BACKGROUND

The Appellants' invention relates to a self-thickened aqueous cleaning composition and process of making. Claim 1 is representative of the subject matter on appeal and is reproduced below:

1. A self-thickened aqueous cleaning composition having a viscosity of from 50 to 700 cps at 60 rpm shear rate at 20EC, comprising from 1% to 25% by weight of the total composition of an alkyl sulphate anionic surfactant derived from natural coconut oil, from 0.1% to 8% by weight of the total composition of ammonium salts and from 0.5% to 25% by weight of the total composition of a compound of the structure :

$$R_1\text{-}O\_\_ [(R_2O)\ n\ (R_3O)m] \_\_R_4, \text{ wherein :}$$

- R_1 is a $C_{1\text{-}25}$ alkyl or alkenyl group;

- R_2 is a $C_{2\text{-}4}$ aliphatic hydrocarbon chain;

- R_3 is a methyl or ethyl monosubstituted C_2-C_4 aliphatic hydrocarbon chain;

- R_4 is a $C_{1\text{-}25}$ alkyl or alkenyl or carboxyl chain, or H;

- n is an integer of from 1 to 10;

- m is an integer of from 0 to 20;

or mixtures thereof.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Smith et al. (Smith)	4,333,862	Jun. 8, 1982
Chung et al. (Chung)	4,412,934	Nov. 1, 1983
Erilli et al. (Erilli)	4,671,895	Jun. 9, 1987
Overton et al. (Overton)	4,781,854	Nov. 1, 1988

Gosselink	4,861,512	Aug. 29, 1989
Aoyagi et al. (Aoyagi)	5,118,436	Jun. 2, 1992

Claims 1-8, 14-16 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Smith in combination with Erilli. Claims 1-8, 10, 14-16 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Smith in combination with Erilli and Gosselink. Claims 1-8, 11 and 14-19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Overton in combination with Chung. Claims 1-9 and 11-19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Overton in combination with Chung and Aoyagi.

We will not sustain the rejection of claims 1-8, 14-16 and 19 under 35 U.S.C. § 103 as being unpatentable over Smith in combination with Erilli. We also will not sustain the rejection of claims 1-8, 10, 14-16 and 19 under 35 U.S.C. § 103 as being unpatentable over Smith in combination with Erilli and Gosselink. However, we will sustain the rejection of claims 1-8, 11 and 14-19 under 35 U.S.C. § 103 as being unpatentable over Overton in combination with Chung. We will also sustain the rejection of claims 1-9 and 11-19 under 35 U.S.C. § 103 as being unpatentable over Overton in combination with Chung and Aoyagi. Our reasons follow.

OPINION

According to the Specification at pages 1 and 2, thickened cleaning compositions were well known in the art and have been used in the formulation of hard surface and laundry cleaning

compositions. The Specification indicates that the simplest way to make thickened cleaning compositions is to add a thickener to a non-viscous product. However, according to the Specification, it was also known in the art to formulate a composition that is thick without the addition of thickener by combining an anionic surfactant with an electrolyte in an aqueous medium. The viscosity of the mixture can be adjusted by balancing the two ingredients. What Appellants have done is used this self-thickening technique with a specific surfactant, an alkyl sulphate[1] anionic surfactant derived from coconut oil. Appellants found that when the coconut oil derived surfactant was combined with electrolyte, the composition was not physically stable at low temperature and the product underwent phase separation. Appellants solved this problem by using specific ammonium salts as the electrolyte and adding a nonionic surfactant from a selected class to the mixture. Claim 1 is directed to a composition of a specific viscosity range including

1 to 25 weight percent coconut oil derived alkyl sulphate anionic surfactant,

0.1 to 8 weight percent ammonium salts and

0.5 to 25 weight percent nonionic surfactant of a selected class.

Against this back drop we turn to the rejections.

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[1]We note that page 2 of the Specification uses the spelling “sulfate” while the claims use the spelling “sulphate”. The prior art also varies the spelling of sulphur based compounds. To be consistent, we will use the “sulphate” spelling.

Smith in Combination with Erilli

As pointed out by the Examiner in the rejection (Answer, page 5), Smith teaches a liquid detergent composition containing anionic surfactant, a quaternary ammonium cationic surfactant and nonionic surfactant of a class overlapping the claimed class (col. 1, line 65 to col. 2, line 12). All of the proportions overlap with those claimed. See column 2, line 63 to column 3, line 12. The anionic surfactant may be an alkyl sulphate anionic surfactant derived from coconut oil (col. 8, lines 51-55). The cationic surfactant may be a quaternary ammonium salt (col. 4, lines 33-49). However, Smith is silent with regard to the viscosity of the detergent composition. The Examiner attempts to remedy the deficiency of Smith by adding Erilli to the rejection. Erilli teaches adding a thickening agent such as a gum or cellulose derivative to a detergent to adjust the viscosity. Erilli indicates that a viscosity of 200 cps is considered best by consumers.

The problem with this combination of art, as pointed out by Appellants at pages 4 and 5 of the Brief, is that nothing in either reference indicates that the composition would have been self-thickening. In addition, there is no reasonable basis to believe that self-thickening inherently occurs. While the proportions of the three ingredients overlap with those claimed and optimization of the ranges may result in self-thickening, there is no evidence that one of ordinary skill in the art would have known how to achieve the optimal condition. The fact that a certain result or characteristic *may* occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); *In re Oelrich*, 666 F.2d 578,

581-82, 212 USPQ 323, 326 (CCPA 1981). Furthermore, "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Int. 1990). While the claim does not exclude the presence of other thickeners, it does require the composition based on the three ingredients be self-thickening. As it has not been established that the composition suggested by Smith and Erilli is necessarily self-thickening, we will not sustain this rejection.

Smith in Combination with Erilli and Gosselink

Gosselink does not cure the deficiencies of Smith in combination with Erilli as discussed above and therefore we will not sustain the rejection based on the combination of Smith, Erilli and Gosselink.

Overton in Combination with Chung

Turning to the rejection of claims 1-8, 11, and 14-19 as obvious over Overton and Chung, we note that Overton teaches a self-thickening bleach-containing acidic cleaning composition (col. 1, lines 58-60). The viscosity range overlaps that claimed. The composition includes a thickening sulphonic anionic surfactant (col. 2, lines 7-10) which may be an ammonium salt (col. 3, lines 11-14) in a concentration of 0.5 to 20 weight percent preferably 1 to 7.5 weight percent (col. 3, lines 28-31). The broad range overlaps the claimed range and the preferred range is within the claimed range of 0.1 to 8 weight percent. The composition optionally includes up to 5 weight percent co-surfactants such as secondary alcohol ethoxylates within the claimed class (col. 3, lines 41-43) and anionic linear alkyl

sulphate surfactants (col. 3, lines 45-50). Overton does not indicate how the alkyl sulphate surfactant is derived. However, Chung teaches similar bleaching compositions and indicates that useful anionic surfactants for use in the bleaching compositions can be obtained by sulphating higher alcohols produced by reducing the glycerides of coconut oil (col. 8, lines 40-51). The Examiner concludes that:

> It would have been obvious to one of ordinary skill in the art at the time the invention was made to formulate a bleach/detergent composition which contains an anionic alkyl sulfate surfactant, a nonionic surfactant as claimed, an ammonium salt of an anionic surfactant (as a thickening surfactant), and hydrogen peroxide, all in their claimed proportions, because such compositions fall within the scope of those as preferred by Overton. It would have been obvious to one of ordinary skill in the art at the time the invention was [made to] use alkyl sulfates derived from coconut oil as the anionic alkyl sulfate co-surfactants in the compositions of Overton because Chung teaches these surfactants as preferred alkyl sulfate anionic surfactants in bleach compositions, absent a showing otherwise. (Answer, page 10).

We agree with Appellants that Overton does not explicitly suggest that the alkyl sulphate be derived from coconut oil (Brief, page 6). However, the Examiner has established that derivation of alkyl sulphate anionic surfactants from coconut oil for use in bleaching compositions was conventional in the art at the time the invention was made. Since Overton is silent as to the derivation of the alkyl sulphate surfactant, one of ordinary skill in the art would have chosen a conventionally derived one such as that taught by Chung as it would have been readily available.

Appellants argue that Overton only teaches alkyl sulphates as an optional replacement for the optional nonionic co-surfactant (Brief, page 6). This is not all Overton teaches. Overton indicates that "anionic co-surfactants [such as linear alkyl sulphates] ... may be used instead of or ***in admixture with***

the nonionic co-surfactant." (col. 3, lines 45-47). Overton clearly contemplates adding both the linear alkyl sulphate anionic surfactant and the nonionic surfactant to the sulphonic thickening surfactant.

Appellants argue that the ammonium salts disclosed in Overton are different from those claimed (Brief, page 6). "During patent examination, the pending claims must be interpreted as broadly as their terms reasonably allow." *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). It is improper to read limitations from the specification into the claims. *Id. See also In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000). "Generally, particular limitations or embodiments appearing in the specification will not be read into the claims." *Enercon GmbH v. ITC*, 151 F.3d 1376, 1384, 47 USPQ2d 1725, 1731 (Fed. Cir. 1998)(*quoting Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 867, 228 USPQ 90, 93 (Fed. Cir. 1985)). Claim 1 simply recites that the composition is to contain "0.1% to 8% by weight of the total composition of ammonium salts." The Specification offers no definition of "ammonium salts" which would operate to exclude the ammonium salt surfactants of Overton. The Examiner correctly declined to read the specific ammonium salt compositions disclosed in the Specification into the claim.

Appellants further point out that the references do not discuss the problem solved by Appellants. This is immaterial because a *prima facie* case of obviousness does not require that the applied prior art recognize and address the specific problem upon which the inventor was working. *See In re Dillon*, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901-1902 (Fed. Cir. 1990)(*en banc*), *cert denied*, 500 U.S. 904 (1991). The discovery of an additional advantage by applicant does not make

the claims patentable. *See In re Kronig*, 190 USPQ 425 (CCPA 1976) and *In re Heck*, 216 USPQ 1038 (Fed. Cir. 1983).

In regard to the combination of Overton with Chung, Appellants argue that the combination is illogical (Brief, page 6). We do not agree. Chung is simply evidence that derivation of alkyl sulphate surfactants from coconut oil was conventional. Chung is relied on to interpret the more generalized disclosure of alkyl sulphate in Overton. The rejection does not require Chung to create a problem and then solve it as argued. The disclosure of Chung is worthwhile simply because it provides further detail as to the origins of conventional alkyl sulphate surfactants used in bleaching compositions.

We conclude that the Examiner has established a *prima facie* case of obviousness with respect to the subject matter of claims 1-8, 11, and 14-19 which has not been sufficiently rebutted by Appellants.

Overton in Combination with Chung and Aoyagi

Overton teaches adding an acidic compound capable of providing the bleaching composition with a pH value of below 4 (col. 4, lines 8-11). Overton indicates that suitable acidic compounds are in particular found among the strong mineral acids and lists several such acids including sulphuric acid (col. 4, lines 14-18). Aoyagi teaches a bleaching composition in which the pH is adjusted to 1.5 to 6, preferably 2 to 4.5 using either an inorganic acid or an organic acid (col. 3, lines 58-62). Both sulphuric acid and citric acid are listed as usable. We agree with the Examiner that Aoyagi is evidence that those of ordinary skill in the art of bleaching compositions recognized that citric acid was equivalent

to sulphuric acid and other mineral acids for pH adjustment to levels below 4. A person of ordinary skill in the art, armed with Aoyagi's disclosure, would have expected to be successful using citric acid instead of mineral acid to adjust the pH and would have made the substitution based on cost and convenience.

In regard to the process of claims 12 and 13, we find no substantive arguments in the argument section of the Brief concerning the subject matter of these claims. To the extent that claims 12 and 13 have been separately argued, the Examiner has persuaded us that the process steps are obvious.

We conclude that the Examiner has established a *prima facie* case of obviousness with respect to the subject matter of claims 1-9 and 11-19 which has not been sufficiently rebutted by Appellants.

CONCLUSION

To summarize, the decision of the Examiner to reject claims 1-9 and 11-19 under 35 U.S.C. § 103 over Overton in combination with Chung and Overton in combination with Chung and Aoyagi is affirmed but the decision of the Examiner to reject claims 1-8, 10, 14-16 and 19 under 35 U.S.C. § 103 over Smith in combination with Erilli and Smith in combination with Erilli and Gosselink is reversed. Therefore, the decision is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JOHN D. SMITH	)
Administrative Patent Judge	)
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	)
	) BOARD OF PATENT
PETER F. KRATZ	) APPEALS
Administrative Patent Judge	) AND
	) INTERFERENCES
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CATHERINE TIMM	)
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APPEAL NO. 1996-3847 - JUDGE TIMM
APPLICATION NO. 08/162,063

APJ TIMM

APJ SMITH

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DECISION: **AFFIRMED IN PART**

Prepared By: TINA D. LEE

DRAFT TYPED: 23 Aug 01

FINAL TYPED: